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A STUDY ON THE EFFECTIVENESS OF
DEFENSE PROFIT OBJECTIVES AND
THEIR COMPATIBILITY WITH
INDUSTRY PROFIT OBJECTIVES

by

Charles L. Rech

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A STUDY ON THE
EFFECTIVENESS OF DEFENSE PROFIT OBJECTIVES
AND THEIR
COMPATIBILITY WITH INDUSTRY PROFIT OBJECTIVES

by

LCDR Charles L. Rech

Bachelor of Science (Psychology)
St. Vincent College, 1960

A thesis submitted to the
School of Government and Business Administration
of
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in partial fulfillment of the requirements for the
Degree of Master of Business Administration

Thesis directed by

Stephen R. Chitwood, PhD
Assistant Professor of Public Administration

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ABSTRACT

The profit motive is generally regarded as being the guiding light of business firms. It follows, therefore, that if the government can effectively harness this profit motive it will be able to produce greater efficiency on the part of defense contractors. This study examines the profit motive in some detail with particular reference to selected methods which have been developed to harness it in defense contracting. It concludes that there exists a significant amount of dissent concerning the role of profit in government contracting, and that conceptually, current policies and procedures do not motivate contractor's to achieve greater efficiency in the performance of the contract.

PREFACE

This thesis is essentially a conceptual study. It deals with such abstractions as contractor efficiency and the profit motive. However, every attempt has been made to relate these concepts as they are developed to the practical operations of defense contracting.

In essence, the proper evaluation of any study depends, to some degree, upon the background and point of view of its author. In this case, the author is a United States Navy Supply Corps Officer with some nine years experience. However, the author has had very little background or exposure to the functional area of government procurement. Accordingly, personal experiences have not been recounted in this thesis. Nor does it necessarily represent the official opinion of the United States Navy or the Department of Defense.

Advice and guidance was solicited from various sources, and the author wishes to express his gratitude to all who made this thesis possible particularly my wife for her perseverance and constant support.

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CHAPTER I

INTRODUCTION

Subject and Approach

The subject of this study is the effectiveness of defense profit objectives and their compatability with industry profit objectives. Government profit policy is founded on the premise that the profit motive can and should be used to stimulate efficient contract performance. While we may speak of the government as a group directed toward this common objective, the same cannot be said of industry. This same objective takes on relative importance for various segments of industry and frequently differs from one industry to another. There are many reasons why a company will take a certain profit position on a particular contract.

The government is committed to the principle that each contract must be priced separately and independently and that no consideration is to be given to profits or losses on other contracts. While industry adapts to this principle, they do not adopt it. Most companies have definite earnings objectives for each fiscal period, and while management is concerned with expected profitability of each segment of the company's operations, planning and effort are aimed at making total operations meet this earnings objective. This would seem to indicate an obvious lack of compatability between government and industry profit objectives. However,

the government has various tools at its disposal which in theory are designed to develop consonance between these objectives. Specific reference will be made to these methods which are employed in Department of Defense contracts.

Defense management is greatly concerned with the effectiveness of profit policies and procedures. Profit has been widely heralded as the single, most significant key to greater contractor motivation.¹ In 1963, Secretary of Defense Robert S. McNamara made the following statement to the House Military Appropriations Subcommittee:

The average profit as a percent of sales on defense work . . . is something on the order of 3% plus. This is far too low a rate in relation to the investment required to draw to the Defense business the most efficient resources in terms of human abilities and equipment.²

Former Assistant Secretary of Defense Thomas D. Morris' remarks in his address at the 1967 DOD-wide Procurement Pricing Conference at Hershey, Pennsylvania further emphasize the importance of the profit motive:³

Our interest in the profits of the defense industry is not to guarantee a contractor a profit or to necessarily increase industry profit levels. Rather, it is to insure that: (1) In the short run, we are making the profit motive work for DOD in achieving maximum contractor motivation for reduced costs and increased performance; and (2) In the long run, profit opportunities are sufficiently attractive to maintain a healthy, technologically advanced and responsive industry.

¹See, for example, "Higher Profits for Manufacturers Could Save the Government 'Millions' Hurley Tells Hebert Committee," American Aviation, XXI (29 July 1957), p. 18.

²"SecDef Says Procurement Waste Lies in 'Costs' not 'Profits,'" Army, Navy, Air Force Journal and Register, C (6 April 1963), p. 15.

³The Department of Defense-Wide Procurement-Pricing Conference. Proceedings of Panel No. 14, Profit, (Hershey, Pennsylvania, 1967), p.

Conversely, industry considerations are equally relevant to the effectiveness of the profit motive. One consideration is that profit remains the most available clear measure of business success. A second consideration is that, notwithstanding the protestations of theorists and analysts, profit maximization is still widely believed to be the sole legitimate objective of the business firm. The Chairman of the Board of Directors of General Foods Corporation, Charles G. Mortimer, clearly enunciated his belief in the importance of the profit motive in an address to his stockholders:

What I want to talk to you about today transcends the interest we share as stockholders of General Foods in our own company's well-being. It is the stake we all have—186 million Americans—in bringing about a prompt turn-about in the widespread fallacious notion which persists that while our American profit system is good, the profits which make it possible are, somehow, bad if they exceed a bare minimum.⁴

On whatever basis, it must be concluded that profit, to some extent, does constitute one definite objective of the business firm. Accordingly, it follows that business actions and behavior will be guided to some degree by profit considerations. The important qualification to this is the recognition that profit considerations will not always be the sole or even the controlling motivator. However, the profit motive does exist as one means by which efficiency in defense contracting may be usefully promoted. Therefore, a study of existing DOD profit policies and procedures, their implementation and their consequences would appear appropriate, and hopefully useful in analyzing the efficiency of the defense establishment.

⁴Charles G. Mortimer, "The Indispensable Function of Profits," Vital Speeches of the Day, XXVIII (1 September 1962), p. 684.

Research Questions

The primary question this paper attempts to answer is:

- How effective are the Department of Defense profit policies and procedures?

The subsidiary questions are:

- Is the DOD really making the profit motive work to achieve greater efficiency and higher levels of contract performance?
- Are defense profit opportunities sufficient to attract and maintain the best industrial capabilities?
- What differences exist between industry and defense profit objectives, and what effects do these differences have on meeting defense profit objectives?
- Do the weighted guidelines work toward achieving the desired results?
- Do defense objectives recognize the need for compensation of "capital employed, risk, and know-how furnished"?

Scope of the Study

During the past decade, Congress, the Secretary of Defense, and the services have focused considerable attention on the Department of Defense policies and procedures relating to the negotiation of contract profit and fee. These studies and investigations underscored significant weaknesses in the methodology (objectives) used to meet the stated purpose. As a result, numerous changes were made in procurement and contracting policies which directly or indirectly influenced the

profitability of defense business. The most significant changes were incentive contracting, the weighted guidelines approach, multi-year procurement and value engineering. The research will center predominately around the weighted guidelines technique since it alone is the most critical and far-reaching element in profit determination. In addition, some discussion must be directed toward incentive contracting because of its interplay with the weighted guidelines risk factors.

In discussing government procurement policies relating to profit, a distinction should be made between procurements awarded on the basis of price competition and those awarded on the basis of other criteria. Department of Defense basic policy is, where possible, to rely on the disciplines of the commercial market place in establishing reasonable contract prices. Whatever profits may be made in these situations are counted as the fair rewards of efficiency; whatever losses may be incurred are the penalties of inefficiency. For much of defense procurement, however, it is not possible to employ the pricing disciplines of the market place. In these cases, price analysis is necessary. This procedure requires a comparison of competitor prices for similar materials. Profit is not a consideration under price analysis since the contractor's price would include cost and fee or profit (selling price). When price analysis is not feasible due to the scope or uniqueness of the requirement, a detailed cost analysis is mandatory. Cost analysis includes an evaluation of each cost component, e.g., material, direct labor, overhead, general and administrative expenses, etc. In these cases, profit is negotiated. The term cost denotes that amount necessary to produce an item or furnish a service. The

term profit is generally thought to be that which remains with a producer after all costs of production have been paid.⁵

It seems appropriate at this point to introduce briefly several ideas that presently exist concerning determination of a fair and reasonable profit. Three concepts are sufficiently relevant to warrant attention. The first considers profit as a percentage of a base figure, generally cost of sales. The second concept calculates profit as a percentage of capital invested (return on investment principle). This is the method used in financial circles. The third suggests that profit should be based on a percentage of the contractor's actual effort or participation in the program. It is important to note however, that none of the concepts go down a one-way track. Each recognizes that in order to encourage production at the lowest cost consistent with quality and schedule requirements, negotiated profits should not be based solely on labor and material costs or, at the other extreme, should they provide a guaranteed return on the capital invested.

In summary, the scope of this thesis will include:

- a brief synopsis of historical defense profit policies and attendant investigation/studies which led to the weighted guidelines technique;
- a discussion of the weighted guidelines technique and its relationship to the effective implementation of current Government profit policies;
- an assesment of other relevent profit determinations; and

⁵Committee on Government Operations, "Pyramiding of Profit and Costs in the Missile Procurement Program," U.S. Senate, 88th Cong., 2nd sess., Report No. 970, March 31, 1964.

• development of an adequate foundation upon which to build conclusions concerning the objectives of the current profit methodology.

Organization and Methodology

The study has been organized in keeping with its expressed objectives and scope. Chapter II reviews the various concepts of profit with particular emphasis on the legislative/regulatory aspects and the attendant outgrowth of the weighted guidelines method of profit determination. Other related concepts are also discussed. Chapter III explores the nature of the profit motive in the defense industry and its effectiveness as a means of promoting contractor efficiency. It further includes a comparison of DOD and industry profit philosophies, the extent of differences, and their effects on meeting defense profit objectives. Chapter IV presents a representative sample of third-party interest, particularly congressional views. Chapter V concludes with a brief summary and conclusions derived on the basis of information included in Chapter II through IV.

CHAPTER II

DEFENSE PROFIT OBJECTIVES

Historical Development

The term "profit" denotes many different things to many different individuals. Although our society gives lip service to the profit motive, a universally accepted definition is conspicuously lacking. However, before considering Department of Defense (DOD) profit policies and objectives, a valid concept of profit or return must be established. In general, profit must be examined from three points of view—accounting, economic, and legislative/regulatory.

Accounting Profit

Accounting profit is an estimate of the financial effects of operations during the accounting period on the owner's equity. Simply expressed, the net profit of a business is the final item at the bottom of an income statement; the term commonly referred to as net income. And net income is what is left after expenses are subtracted from revenues. Although the net profit figure appears precise it is, in

fact, an estimate subject to many qualifications.¹ When industry and government negotiators meet to determine a "fair and reasonable" profit, they are dealing with an accounting profit. In fact, the estimates used to determine the cost and profit parameters generally resemble an income statement.

Economic Profit

A coherent and generally accepted theory of economic profit cannot be provided for none exists. Joel Dean states three possible views of economic profit:²

1. The reward for bearing risks and uncertainties;
2. The consequences of frictions and imperfections in the competitive adjustment of the economy to dynamic changes; and
3. The reward for successful innovation.

It would appear that a mix of theories 1 and 3 would apply in the defense industry, in as much as uncertainty and risk are more prevalent than in the commercial market; and that the defense industry is characterized by low capital investment, concern about reputation, and an impressive record of innovation.

¹Robert N. Anthony, Management Accounting, (Homewood, Richard D. Irwin, Inc., 1960), p. 236.

²Joel Dean, Managerial Economics, (Englewood Cliffs, Prentice-Hall, Inc., 1951), p. 6.

Legislative/Regulatory Profit

Where government has considered competition an insufficient governor of the profit motive, laws, and regulations have been instituted to secure to the public the benefits normally expected from competition. Many laws, regulations, and court decisions are on record regarding market competition and profit and a survey of the most pertinent is included in the following synopsis of historical defense policies and objectives.

Negotiation of defense profits was, until the last decade or so, primarily a wartime phenomenon. In essence, profit rates were based on habit or precedence rather than on a systematic application of a formal set of rules. The Armed Services Procurement Act and the subsequent implementation of the Armed Services Procurement Regulation (ASPR) included the first formal limitations imposed on the profit element. The language was, however, very narrow and restrictive. The Armed Services Procurement Act, 10 U.S.C. 230(d) provides in part that:

. . . the fee for performing a cost-plus-a-fixed fee contract for experimental, developmental, or research work may not be more than 15 percent of the estimated cost of the contract, not including the fee. The fee for performing a cost-plus-a-fixed-fee contract for architectural or engineering services for a public work or utility plus the cost of those services to the contractor may not be more than 6 percent of the estimated cost of that work or project, not including the fee.

The statutory limitation upon fees of the Armed Services Procurement Act were reinforced and extended by administrative limitations set forth in the Armed Services Procurement Regulation:

. . . are authorized to approve fixed fees not in excess of (1) ten percent (10%) of the estimated costs, exclusive of fee, or any contract for experimental, developmental, or research work or (2) seven percent (7%) of the estimated

cost, exclusive of fee, or any other contract except that in contracts for architectural or engineering services the fixed fee shall not exceed that authorized by terms of the law as set forth above (10 U.S.C. 2306(d)).³

Thus, as a kind of buffer to the 15 per cent maximum fee permitted under statute which might be negotiated in a cost-plus-fixed-fee contract for experimental, developmental or research work, ASPR establishes a 10 per cent maximum fee under regular contracting procedures and deters higher fees by requiring special checking and documentation at the Secretary level. Similarly, ASPR establishes a 7 per cent maximum fee in a cost-plus-fixed fee contract for most other work as compared with the maximum fee of 10 per cent permitted under statute.

A vital statute on profit determination is the renegotiation Act of 1951 which provides that the Renegotiation Board will take back profits made on defense contracts which are excessive. (Renegotiation was instituted in 1942 and was continued by statutes in 1943 and 1948.) This procedure is retroactive and applies to a contractor's total annual sales of the products which are covered by the act.

Still another law which received healthy criticism from many directions was the Vinson-Trammel Act of 1934 which was passed to limit profits made on ship and aircraft contracts. It is couched in terms of profits as a percentage of total contract price. This act is still in effect but has been suspended by the Renegotiation Act.

³ Armed Services Procurement Regulation, (Washington: Department of Defense, 1 March 1963), par. 3-404.4(a) and (Rev. 5, 11 May 1964), par. 3-405.4(a).

As previously pointed out, until 1962 "standard" profits were negotiated largely as a matter of routine when lower profits were in order based upon the contractor's limited contribution to the end product. The McClellan Committee hearings held in 1962 underscored the fact the uncritical application of customary profit percentages to total sales dollars is not a proper way to arrive at profit figures. Studies by the Office of the Secretary of Defense showed that negotiated profits by type of contract fall within narrow ranges in terms of percentage of sales price.⁴ In an effort to alter this historical pattern of profit determination, DOD awarded a study contract to the Logistics Management Institute in May 1962 to develop specific guidelines for government negotiators to use in establishing profits. As a result of this study and further effort by the Department of Defense and coordination with industry, a new profit policy known as the Weighted Guidelines Technique was instituted. This technique will be described in a subsequent paragraph. This new and major shift in defense policy was highlighted by the following statement:

. . . Effective national defense in a free enterprise economy requires that the best industrial capabilities be attracted to defense contracts. These capabilities will be driven away from the defense market if defense contracts are characterized by low profit opportunities. Consequently, negotiations aimed at merely reducing prices by reducing profit, with no realization of the function of profit cannot be condoned⁵

⁴Logistics Management Institute, Profit or Fee Policy, Report to the Department of Defense, 1962 (Washington, D.C.), p. 22.

⁵Armed Services Procurement Regulation, (Washington: Department of Defense, August 1963), par. 3-808.

Concurrent with the implementation of the Weighted Guidelines Technique, the administrative limitations discussed previously were suspended in order to recognize the full value of the Weighted Guidelines Technique.

This then is where we stand today. Has the Weighted Guidelines Technique been successful in carrying forth the defense policies? There are many critics of the system; some contend that government negotiators continue to "back into" the profit targets with the result that the weight ranges are narrow and that profit has not really increased at all; some contend that the risk by the contractor is not commensurate with the profit rates realized; and still others complain that the weighted guidelines technique does not place enough emphasis on capital invested.

The Department of Defense has, for a number of years, contended that profit rates enjoyed by the defense industry have been marginally adequate, and under certain conditions tend to range on the low side. Congress on the other hand, has remained steadfast in its claim that defense profits have been excessive. Industry has been relatively closed-mouth concerning the profit levels, but their thinking appears to be in line with that of the defense department. The remainder of this chapter is devoted to the Department of Defense philosophies on the subject. A subsequent chapter will describe the philosophies of both industry and other critics.

Weighted Guidelines

The notion that the profit motive can be employed as a tool to achieve more efficient performance of government contracts is not new. What is relatively new is the great emphasis which is being placed on the utilization of profit as a

motivator of efficiency in all applicable instances rather than merely in isolated contracts. The Weighted Guidelines method was designed to force government negotiators to be more discriminating in bargaining for the profit element, and it applies, generally, to all negotiated procurements where adequate price competition is not available.

Basically, the system works like this: The contracting officer will evaluate an industry proposal on the basis of a checklist of mathematically weighted factors. An initial evaluation will measure the contractors input to total performance based on a set of values. These values and attendant ranges are as follows:⁶

| <u>Profit Factors</u> | <u>Weighted Range</u> |
|-------------------------------------|-----------------------|
| Direct Materials | |
| Purchased Parts | 1 to 4 per cent |
| Subcontracted Items | 1 to 4 per cent |
| Other Materials | 1 to 4 per cent |
| Engineering Labor | 9 to 15 per cent |
| Engineering Overhead | 6 to 9 per cent |
| Manufacturing Labor | 5 to 9 per cent |
| Manufacturing Overhead | 4 to 7 per cent |
| General and Administrative Expenses | 6 to 8 per cent |

These categories correspond directly to the formal cost breakdown required in contract proposals and are a measure of what skills are necessary and what the contractor himself must do to meet the contract requirements in an effective manner. These categories recognize that within a given sales dollar figure necessary efforts on the part of individual contractors can vary widely both in

⁶Armed Services Procurement Regulation, (Washington: Department of Defense, January 1, 1969), par. 3-808.4a.

quantity and quality and that the profit objective should reflect the extent and nature of the contractor's contribution to total performance. For example, a contractor who proposes to subcontract most of his work and who is not required to provide major technical or administrative guidance toward the subcontract effort should receive a lower profit percentage for this factor than would a contractor who accomplishes the majority of the work with his own resources. Once the contracting officer has assigned the values, he will then calculate a composite or average profit target for the proposal.

The second phase requires assignment of profit rates to other factors as direct additions to or subtractions from the composite figure. These factors and attendant ranges are as follows:⁷

| <u>Profit Factors</u> | <u>Weight Range</u> |
|---|---------------------|
| Contractors assumption of Contract Cost Risk | 0 to 7 per cent |
| Record of Contractor's Performance | -2 to +2 per cent |
| Selected factors | -2 to +2 per cent |

The purpose of the cost risk factor is to discriminate among procurement situations for the cost responsibility a contractor assumes under his contract, and to motivate him to assume greater responsibility. Evaluation of this risk requires a determination of the extent to which the contractor is able to assume, and the government relinquish, the management and cost responsibility under his contract, and the extent to which he is motivated to take positive steps to avoid

⁷
Ibid.

allowable but avoidable costs. The expressed intent of the range of weights of 0 to 7 per cent is to permit the assignment of 0 to procurement situations where the contractor assumed minimal cost risks, as in the use of a cost-plus-fixed-fee best efforts contract and the weight of 7 per cent where the contractor assumed maximum risk, as in the case of a closely priced firm-fixed-price contract for the first production of a complex item. The general range of weights within the total range of 0 to 7 per cent for particular contract types are as follows:⁸

| <u>Type of Contract</u> | <u>Weight Range</u> |
|---|---------------------|
| Cost-plus-fixed-fee | 0 to 1 per cent |
| Cost-plus-incentive-fee including cost incentives only | 1 to 2 per cent |
| Cost-plus-incentive-fee including cost, delivery, and performance incentives | 1-1/2 to 3 per cent |
| Fixed-price-incentive including cost incentives only | 2 to 4 per cent |
| Fixed-price-incentive including cost performance and delivery incentives | 3 to 5 per cent |
| Prospective price redetermination | 4 to 5 per cent |
| Firm fixed-price | 5 to 7 per cent |

The contractors record for past performance includes such elements as quality of products, efficiency of cost, and reliability of cost estimates. The purpose of this factor is twofold; first, to reward or penalize the contractor in the present negotiations for past performance, and second, to motivate the contractor to improve his performance position for future evaluations. The elements contained in this profit factor do not receive individual weights since they are not of equal importance and their relative importance is difficult to fix. This area very likely results in the majority of judgment values.

⁸Ibid., para. 3-808.5c.

The selected factors segment of weighted guidelines also enjoys a four-point range similar to the foregoing performance factor. This area is predominately concerned with the contractor's independence/dependence on government furnished equipment, facilities, and financial resources. Since DOD policy is to discourage reliance on government resources, the contractor who uses new government resources for the performance of a contract is penalized to a greater degree than the contractor who uses existing government resources or in-house resources. The end result of weight assignment to the various profit factors discussed herein is a "profit target" figure which carries directly into negotiations. The target finally agreed upon by both parties becomes the midpoint or "trigger" figure in incentive contracting.

When the procedure was first introduced, it was described by Assistant Secretary of Defense (Installations and Logistics) Thomas D. Morris as "a more rational, systematic, and disciplined approach . . ."⁹ One crucial problem that can be foreseen in the application of these profit guidelines is whether they will be applied without regard to the bargaining power of the parties. For instance, if the contractor feels the guidelines do not yield a sufficiently high rate of profit to justify taking the work, will the government be willing to pay more than the guidelines provide? Conversely, if the negotiator has been purchasing from a contractor at certain profit levels will he be willing to pay substantially higher profit rates as

⁹ Thomas D. Morris, "Putting the Profit Spur Back into Contracts," Business Week, May 25, 1963, p. 372

dictated by the new guidelines even though he knows that the contractor would perform for the previously acceptable profit rate?¹⁰

Table 1 represents profit rates (median) negotiated by type of work and type of contract. The profit rates are further broken down into preweighted guideline (1959-1963) and postweighted guideline (1964-1968) periods. Analysis reveals that negotiated profit rates for firm-fixed price contracts (greater contractor risk inherent) increased from 10 per cent to 10.9 per cent during the period 1959 to 1968. Concurrently, cost-plus-fixed-fee contracts (minimum contractor risk inherent) also realized an increase in negotiated profit rates from 6.7 per cent to 8 per cent. It should be pointed out that these figures reflect the profit rates initially negotiated (going-in rates). Table 2 will provide a comparison between these going-in rates and final adjusted coming-out rates. The most salient feature of Table 2 is the observation that the final profits were considerably less than the profit rates initially negotiated. Unfortunately, figures were not available for coming-out profits on firm-fixed price contracts; however, based on the trends in other contract types, it can reasonably be assumed that a similar decrease would apply to firm-fixed price contracts. In essence, the tables indicate a marginal increase for going-in and coming-out profit rates during the period 1959-1968. That profits have in fact risen since the inception of the weighted guidelines would tend to counter the potential problem of application

¹⁰Ralph C. Nash, Jr., "Pricing Policies in Government Contracts," Law and Contemporary Problems, Vol 29, No. 2 (Spring 1964), pp. 361-379.

Profit Rates Negotiated By Type of Work and Type of Contract

(\$ Amounts in Millions)

| Type of Contract and Fiscal Year | Number of Contracts | | | Cost | | | Profit Per Cent (Median) | | | |
|--|---------------------|------------|-------|-------|------------|---------|--------------------------|------------|-------|-------|
| | R&D | Production | Total | R&D | Production | Total | R&D | Production | Total | |
| FFP | 1959-1963 | 339 | 1,243 | 1,582 | \$1,122 | \$5,443 | \$6,565 | 9.9% | 10.0% | 10.0% |
| | 1964 | 67 | 374 | 441 | 110 | 2,398 | 2,508 | 9.8 | 10.0 | 10.0 |
| | 1965 | 70 | 332 | 402 | 131 | 2,422 | 2,553 | 10.0 | 10.5 | 10.4 |
| | 1966 | 71 | 480 | 551 | 121 | 1,667 | 1,788 | 9.9 | 11.0 | 10.4 |
| | 1967 | 199 | 1,471 | 1,670 | 200 | 2,441 | 2,641 | 10.0 | 10.7 | 10.5 |
| | 1968 | 166 | 1,600 | 1,766 | 162 | 3,440 | 3,602 | 10.0 | 11.0 | 10.9 |
| FPI | 1959-1963 | 64 | 332 | 396 | 907 | 9,842 | 10,749 | 9.0 | 9.5 | 9.4 |
| | 1964 | 26 | 144 | 170 | 113 | 1,768 | 1,881 | 10.0 | 9.7 | 9.8 |
| | 1965 | 31 | 107 | 138 | 222 | 1,168 | 1,390 | 11.0 | 9.8 | 10.0 |
| | 1966 | 42 | 122 | 164 | 282 | 1,242 | 1,524 | 10.0 | 9.9 | 10.0 |
| | 1967 | 95 | 348 | 443 | 1,480 | 2,841 | 4,321 | 9.5 | 9.7 | 9.6 |
| | 1968 | 89 | 373 | 462 | 584 | 2,586 | 3,170 | 9.9 | 9.5 | 9.7 |
| CPIF | 1959-1963 | 85 | 51 | 136 | 1,864 | 2,084 | 3,948 | 6.8 | 6.6 | 6.8 |
| | 1964 | 113 | 73 | 186 | 1,146 | 416 | 1,562 | 7.8 | 7.0 | 7.3 |
| | 1965 | 84 | 61 | 145 | 343 | 132 | 475 | 8.0 | 7.3 | 8.0 |
| | 1966 | 117 | 85 | 202 | 720 | 313 | 1,033 | 8.0 | 8.0 | 8.0 |
| | 1967 | 295 | 143 | 438 | 1,180 | 461 | 1,641 | 8.2 | 8.0 | 8.0 |
| | 1968 | 304 | 143 | 447 | 2,402 | 608 | 3,010 | 8.3 | 8.0 | 8.0 |
| CPFF | 1959-1963 | 1,265 | 236 | 1,501 | 7,375 | 2,684 | 10,059 | 6.7 | 6.7 | 6.7 |
| | 1964 | 196 | 71 | 267 | 481 | 259 | 740 | 7.5 | 7.0 | 7.1 |
| | 1965 | 193 | 64 | 257 | 209 | 209 | 418 | 8.0 | 7.3 | 7.8 |
| | 1966 | 127 | 90 | 217 | 231 | 198 | 429 | 8.0 | 7.5 | 8.0 |
| | 1967 | 546 | 203 | 749 | 650 | 364 | 1,014 | 7.9 | 8.0 | 8.0 |
| | 1968 | 543 | 239 | 782 | 979 | 599 | 1,578 | 8.0 | 8.0 | 8.0 |

SOURCE: Department of Defense (Installations and Logistics) Directorate for Statistical Services.

TABLE 2

Profit Rates on Completed Contracts—Before and After Weighted Guidelines
(Contracts Completed in Fiscal Years 1959-1968)

| Department and Type of Contract | AWARDED BEFORE JANUARY 1964 | | | | | |
|--|-----------------------------|----------|--------------------|--------------------|----------|--------------------|
| | Initially Negotiated | | | Adjusted | Final | |
| | # of Contracts | Cost | Profit Per Cent | Profit Per Cent | Cost | Profit Per Cent |
| <u>Army</u> | | | | | | |
| FPR | 188 | \$ 1,440 | 8.8% | 8.8% | \$ 1,578 | 8.4% |
| FPI | 30 | 205 | 9.6 | 9.5 | 225 | 8.9 |
| CPIF | 26 | 54 | 6.8 | 7.1 | 67 | 8.2 |
| CPFF | 474 | 658 | 6.8 | 6.7 | 1,261 | 6.4 |
| Total | 718 | 2,357 | 8.3 | 8.0 | 3,131 | 7.7 |
| <u>Navy</u> | | | | | | |
| FPR | 111 | 529 | 10.3 | 10.1 | 543 | 9.7 |
| FPI | 86 | 1,163 | 9.3 | 9.3 | 1,238 | 9.2 |
| CPIF | 4 | 18 | 7.1 | 7.1 | 18 | 7.0 |
| CPFF | 381 | 938 | 6.2 | 6.2 | 1,265 | 6.0 |
| Total | 582 | 2,648 | 8.2 | 8.2 | 3,064 | 8.0 |
| <u>Air Force</u> | | | | | | |
| FPR | 60 | 576 | 9.8 | 9.9 | 581 | 9.8 |
| FPI | 223 | 3,499 | 9.0 | 9.0 | 3,878 | 9.0 |
| CPIF | 106 | 845 | 6.7 | 6.5 | 926 | 7.6 |
| CPFF | 685 | 3,038 | 6.2 | 6.2 | 4,389 | 5.9 |
| Total | 1,074 | 7,958 | 7.7 | 7.6 | 9,774 | 7.5 |
| <u>DOD</u> | | | | | | |
| FPR | 359 | 2,545 | 9.4 | 9.3 | 2,702 | 8.9 |
| FPI | 339 | 4,867 | 9.1 | 9.1 | 5,341 | 9.1 |
| CPIF | 136 | 917 | 6.7 | 6.5 | 1,011 | 7.7 |
| CPFF | 1,540 | 4,634 | 6.3 | 6.3 | 6,915 | 6.0 |
| Total | 2,374 | \$12,963 | 8.0% | 7.8% | \$15,969 | 7.7% |

TABLE 2—Continued

| Department and Type of Contract | AWARDED AFTER DECEMBER 1963 | | | | | |
|--|-----------------------------|---------|--------------------|--------------------|---------|--------------------|
| | Initially Negotiated | | | Adjusted | Final | |
| | # of Contracts | Cost | Profit Per Cent | Profit Per Cent | Cost | Profit Per Cent |
| <u>Army</u> | | | | | | |
| FPR | 1 | \$ 72 | 9.5% | 9.5% | \$ 72 | 9.5% |
| FPI | 34 | 190 | 10.0 | 10.0 | 216 | 7.5 |
| CPIF | 12 12 | 12 | 7.5 | 6.3 | 18 | 5.1 |
| CPFF | 108 | 75 | 6.9 | 6.5 | 125 | 6.1 |
| Total | 165 | 349 | 9.1 | 8.8 | 431 | 7.4 |
| <u>Navy</u> | | | | | | |
| FPR | 1 | 2 | 9.9 | 11.0 | 1 | 15.2 |
| FPI | 16 | 41 | 10.3 | 8.9 | 45 | 4.0 |
| CPIF | 10 | 20 | 7.7 | 7.5 | 39 | 5.7 |
| CPFF | 39 | 20 | 6.5 | 6.4 | 25 | 6.5 |
| Total | 66 | 83 | 8.7 | 7.9 | 110 | 5.3 |
| <u>Air Force</u> | | | | | | |
| FPR | 3 | 313 | 10.5 | 10.5 | 340 | 8.6 |
| FPI | 50 | 234 | 9.4 | 9.2 | 305 | 9.8 |
| CPIF | 35 | 202 | 6.8 | 6.8 | 237 | 7.7 |
| CPFF | 137 | 175 | 6.9 | 6.5 | 392 | 6.6 |
| Total | 225 | 924 | 8.7 | 8.3 | 1,274 | 8.1 |
| <u>DOD</u> | | | | | | |
| FPR | 5 | 387 | 10.3 | 10.3 | 413 | 8.7 |
| FPI | 100 | 465 | 9.7 | 9.5 | 566 | 8.5 |
| CPIF | 67 | 234 | 6.9 | 6.8 | 294 | 7.3 |
| CPFF | 284 | 270 | 6.8 | 6.5 | 542 | 6.5 |
| Total | 456 | \$1,356 | 8.8% | 8.3% | \$1,815 | 7.7% |

SOURCE: Department of Defense (Installations and Logistics) Directorate for Statistical Services.

TABLE 3

Awards By Type of Contract Pricing Provision
(By Fiscal Year)

| FY | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
|---|-------------------|--------|--------|--------|--------|--------|--------|--------|
| | Per Cent of Total | | | | | | | |
| Type | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Fixed Price | 57.9 | 60.8 | 64.9 | 71.2 | 76.5 | 79.2 | 78.9 | 77.6 |
| Firm | 31.5 | 38.0 | 41.5 | 46.3 | 52.8 | 57.5 | 56.3 | 52.7 |
| Redeterminable | 10.5 | 7.4 | 3.7 | 2.4 | 2.2 | 2.3 | 1.8 | 1.5 |
| Incentive | 11.2 | 12.0 | 15.8 | 18.5 | 16.6 | 15.9 | 17.8 | 18.7 |
| Escalation | 4.7 | 3.4 | 3.9 | 4.0 | 4.9 | 3.5 | 3.0 | 4.7 |
| Cost Reimburse- ment & Other | 42.1 | 39.2 | 35.1 | 28.8 | 23.5 | 20.8 | 21.1 | 22.4 |
| No Fee | 2.0 | 2.3 | 2.4 | 2.3 | 2.4 | 2.2 | 1.9 | 2.0 |
| Fixed Fee | 36.6 | 32.5 | 20.7 | 12.0 | 9.4 | 9.9 | 10.4 | 10.8 |
| Incentive Fee | 3.2 | 4.1 | 11.7 | 14.1 | 11.2 | 8.3 | 8.3 | 9.0 |
| Other | 0.3 | 0.3 | 0.3 | 0.4 | 0.5 | 0.4 | 0.5 | 0.6 |
| SOURCE: Department of Defense (Installations and Logistics) Directorate for Statistical Services. | | | | | | | | |

without regard to the bargaining powers of the parties as indicated previously.

However, a comparison of Tables 1 and 2 with Table 3, awards by type of contract pricing provision, indicates a separate yet related problem—that of the interplay between incentive contracts and the weighted guideline contractor risk factors.

The Department of Defense for a number of years has vigorously pursued the policy of increasing the number of firm-fixed price contracts and decreasing the number of cost-plus-fixed-fee contracts. Obviously this policy was designed to place greater

risk on the contractor with a commensurate increase in profit. This policy has been enormously successful numerically as evidenced by the following percentage increase/decrease extracted from Table 3:

| | <u>1961</u> | <u>1968</u> |
|-----------------------|-------------|-------------|
| Firm-fixed price | 31.5% | 52.7% |
| Cost-plus-fixed price | 36.6% | 10.8% |

However, it is alarming to note that the rise in firm-fixed price contracts coupled with quantification of the contractor risk factor has not resulted in a substantial profit gain. Certainly these figures are relative, and many exponents of the Weighted Guidelines would support these increases as adequate indices. However, this writer does not consider the increase even marginally satisfactory in view of the substantial risk being placed on contractors. Perhaps this deficiency goes back to the original problem of government negotiators refusing to accelerate the profits in accordance with the guidelines. Or perhaps the upper range amount for contractor risk is unrealistic? In any event, this could result in contractors submitting unrealistic bids for other elements in an attempt to offset the inequalities. Some segments of industry have contended for some time that the government's evaluation of risk has serious shortfalls. Among those which are a cause of special concern are:¹¹

1. terminations for convenience;

¹¹National Security Industrial Association Renegotiation Task Committee, NSIA Procurement Advisory Committee, "Recognition of the Risks of Government Contracting," (Washington, NSIA Procurement Information Bulletin, No. 124-57, September 3, 1957), pp. 3-43.

2. unallowability of certain costs;
3. reduction of profits because of numerous design changes;
4. delays in negotiations; and
5. statutory renegotiation.

Brief mention should be made on the decrease in profit rates from the initial negotiation to the final adjusted amount. A major contributor to this divergence may well be the Department of Defense cost principles.

Cost Principles

Section XV of the Armed Services Procurement Regulation (ASPR) covers general cost principles and procedures for the determination and allowance of costs in connection with the negotiation and administration of cost-reimbursement contracts.

Factors that affect the allowability of a cost are its reasonableness, allocability, adherence to sound accounting practices, and the limitations and exclusions in ASPR. Some elements are unallowable by statute (advertising), some by reason of public policy (entertainment), and some by DOD policy (contributions and interest). Other costs, while allowable, are not fully recoverable by contractors due to cost ceilings imposed by the Department of Defense (DOD). These costs, whether unallowable or not recoverable, are nevertheless, necessarily incurred by industry in varying amounts. Those unallowable costs having the greatest impact on profit are:

- Interest,
- Independent research and development,

- o Contributions and donations, and
- o Advertising.

The impact of this type of profit erosion varies from company to company. The Office of the Secretary of Defense (Installations and Logistics) (OSD(I&L)) has estimated that 1 to 2 per cent of cost is involved. The government's rationale on unallowability of certain costs is that it should not provide the means by which contractors can enter the business; that is, the role of fee or profit.

Capital Investment Concept

A crucial problem area centers around that school which criticizes the entire Weighted Guidelines concept due to its failure to adequately consider the capital investment concept.

Procurement regulations have long advocated that contractors should provide and acquire their own facilities and financing in fulfilling government requirements. For perhaps even a longer period the regulations covering the treatment of profit have consistently stated that "the extent of the contractor's investment in facilities and equipment shall be considered in developing the profit objective." It is now generally agreed that the Weighted Guidelines Technique does not, except in an indirect and sometimes negative fashion, give consideration to this very crucial element. Under the investment concept profit, or a part of profit, would be related to the contractors' actual investment in fixed assets and working capital. Cost or percentage of costs would no longer be the sole determinant.

TABLE 4

Profit/Total Capital Investment
(Companies With High and Medium Defense Volume Averages Weighted By Company Sales)

| | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Defense Business | | | | | | | | | |
| Profit/Sales (%) | 5.37 | 5.07 | 4.53 | 4.26 | 4.24 | 3.92 | 3.97 | 4.84 | 4.47 |
| TCI Turnover | 3.8 | 3.8 | 3.8 | 3.4 | 3.4 | 3.2 | 3.1 | 3.0 | 2.9 |
| Profit/TCI (%) | 20.38 | 19.06 | 16.99 | 14.63 | 14.34 | 12.54 | 12.18 | 14.30 | 12.97 |
| Commercial Business | | | | | | | | | |
| Profit/Sales (%) | 6.63 | 6.67 | 4.29 | 5.88 | 8.15 | 8.43 | 9.61 | 10.11 | 9.16 |
| TCI Turnover | 2.0 | 2.1 | 2.1 | 2.2 | 2.2 | 2.0 | 2.1 | 2.1 | 2.2 |
| Profit/TCI (%) | 13.38 | 13.84 | 9.19 | 13.17 | 18.07 | 17.15 | 20.56 | 21.38 | 19.71 |
| FTC/SEC Data | | | | | | | | | |
| Profit/Sales (%) | 7.1 | 8.9 | 7.8 | 7.7 | 8.9 | 9.1 | 9.5 | 10.4 | 10.0 |
| TCI Turnover | 2.0 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 |
| Profit/TCI (%) | 14.1 | 18.8 | 15.9 | 15.1 | 18.5 | 19.2 | 20.4 | 23.1 | 22.6 |

Columns will not multiply due to weighting.

SOURCE: Logistics Management Institute Study, Profit or Fee Policy, Project 66-25, 1967.

Under the present percentage of cost concept, the higher the costs, the higher will be the profit objective. Investments in facilities that lower unit costs tend to lower profits instead of generating additional profits to compensate for the added capital employed. Facilities are generally the contractors' highest risk use of capital. In competitive markets, on the other hand, profits tend to be proportionate to the amount of capital required and risks taken. Higher costs are likely to lower profits, and capital is invested in facilities if it will lower unit costs by more than the extra profit needed on the added capital. This concept can be likened to the financial manager's rate of return concept. Table 4 provides some comparison between profit to capital investment and profit to sales for defense industry and commercial industry. Data from both commercial business and the Federal Trade Commission/Securities Exchange Commission indicate significantly higher profit rates than for comparable defense business.

It can be argued that both return on cost and return on equity are irrelevant and that an analysis of a somewhat deeper nature is required to determine what an adequate return is for the defense industry (or any other). If the view is taken that it is the assets and not the liabilities that make the product and earn the profit, it becomes apparent that the only reasonable way to assess return is to compare the profit to the total investment required to earn the profit. However, several elements peculiar to the Department of Defense tend to cloud this concept. They are government support of the defense contractor and extensive leasing.

Government Support of the Defense Contractor

While it may take many forms, government assistance is generally of two kinds: direct financial support and government-furnished facilities and equipment. Direct financial support takes two broad forms — advance payments and progress payments. Advance payments are a direct contribution to a contractor's capital structure since the government essentially prepays a part of its liability under a contract. Progress payments are an expenditure of the government made during the contract period and have the direct effect of reducing the amount of capital which a contractor must invest in the business. The second major area of government support, facilities and equipment, was discussed earlier with defense department policies thereof (see p. 17).

Leasing

The disallowance of interest costs under government contracts has led to ever-increasing use of leased assets, since reasonable lease payments are allowable costs. Unfortunately, reliable data was not available concerning the use of leased facilities by government contractors.

Inasmuch as leasing permits a contractor to obtain the latest and most efficient equipment, the current policies as to profit application on leasing costs would appear to encourage, or at least not penalize, the use of equipment by the contractor which would increasingly control costs and hence reduce costs to the government.

Summary

The Department of Defense pricing and profit policies can perhaps be most clearly understood in terms of what they are trying to avoid: they seek to avoid slack or sloppy management of government contracts in which routine decisions are made in an "oh well, the government will pay for it" atmosphere and in which allowable but reducible costs are not reduced. The objectives seek to avoid negotiation practices that do not discriminate between excellence and mediocrity. Succinctly stated, the Department of Defense seeks to promote the following principal objectives:

1. reward the contractor who undertakes the more difficult task, requiring higher skills;
2. impel contractors to assume greater cost responsibility, with real distinctions being made not only among different types of contracts, but also among different cost risks within a single contract type;
3. motivate contractors to improved performance; and
4. discourage contractors from relying on government resources.

Among the various approaches that have been offered along this line is one currently being developed by the Logistics Management Institute called the Capital Charge Concept. This approach, which appears to have the interest of the Department of Defense, derives a capital charge for each contract by application of a uniform

capital rate to an established asset base.¹² Supporters of the investment concept appear to have a legitimate argument since the weighted guidelines is cost oriented. The investment in cost saving equipment works to the contractor's disadvantage inasmuch as a diluted cost base will produce a lower profit. Further, the fact that contractors must sometimes make substantial capital investments is not in consonance with the fact that the weighted guidelines are structured to give higher percentages of profits to the labor elements of cost. For example, a range of 9 to 15 per cent applies to engineering labor; yet depreciation of equipment is included in the overhead cost and bears a disproportionately lower profit range of from 4 to 9 per cent.

¹²The Department of Defense-Wide Procurement-Pricing Conference, Proceedings of Panel No. 14, Profit, (Hershey, Pennsylvania, 1967), p. 15.

CHAPTER III

INDUSTRY PROFIT OBJECTIVES

General Philosophy

One of the most difficult problems in the area of government procurement is the determination of when an original contract price contains a reasonable profit. Profit is an extremely subjective concept for a contractor, with the acceptable amount of profit being determined by a number of factors such as:

1. the profit that can be earned doing other work;
2. the amount of fixed costs that can be absorbed by the work in question;

and

3. the other advantages (engineering experience, establishing a preferred position for future business, establishing a new product line, etc.) that will accrue from performing the work.

On the other hand, as indicated previously, the government feels the need to make profits as objective as possible in order to be able to compare contractors and establish fair norms for all. It would seem entirely feasible that these two aspects of profit could conflict in the sense that the contractor's subjective profit goal

might be quite different from the objective profit norm established by the government. With recognized hazards such as this, and many others, it seems appropriate to find the reasons why companies go into defense business at all. An article in the Management Review contains four basic reasons which are labeled patriotism, profits, permanence, and progress.

The elements of patriotism, permanence, and progress certainly have some merit, but will not be discussed in the context of this thesis. However, the profit element requires closer scrutiny. The article states "that the management of every company, large or small, is responsible to its stockholders for making a reasonable return on the invested dollar. Defense business helps bolster the operations of many companies, providing them with a reasonable assurance of profits if the pitfalls in government contracting can be avoided. It concludes that defense work can be rewarding or disastrous, depending on how well the individual company does its homework. Strangely enough, the figures on the profit and loss statements are often the least revealing, since many of the benefits from defense work seem to be on the intangible side of the ledger. But for a smart, alert management . . . the intangible benefits can over the years show up significantly in the profit and loss statements."¹

The tone of this article seems to imply that profits on defense business are not commensurate with those of commercial business, but if integrated can provide an adequate return.

¹"Making Defense Work With Corporate Objectives," The Management Review, (January, 1960), p. 15.

Another view concerning the reasonableness of profit in defense business is that contained in a report issued by Arthur D. Little, Inc. (ADL).² This report examined at some length the trends in defense profits and the question of whether these profits are adequate. The report suggests that neither the return on investment (equity), nor the return on sales, is relevant to the question of whether profits in the defense industry are adequate. The true point of reference, it is argued, is the amount of assets required to produce the equipment sold. The ADL study concludes that the return on assets and the return on equity of the defense industry have been substantially less than comparable returns in all manufacturing corporations. At the same time, ADL does not believe that the defense industry is on the brink of disaster, notwithstanding the probable continuation into the foreseeable future of trends toward decreasing returns on sales, equity, and the ever-rising requirements for funds for modernization, research, and replacement of government investment.³ Individual defense contractors who are inefficient are likely, however, to be severely hurt in the future.⁴ Contemporaneously with the report by Arthur D. Little, the Stanford Research Institute (SRI) published a report covering much of the same ground.⁵ To the extent that the SRI report makes a

²Arthur D. Little, Inc., How Sick Is the Defense Industry, Report to various segments of Industry, September 10, 1963, (Cambridge, Mass.), p. 3.

³Ibid., p. 85.

⁴Ibid., p. 81.

⁵The Stanford Research Institute, The Industry—Government Aerospace Relationship, May 1963, (Menlo Park), p. 41.

judgment concerning the adequacy of profits, it reaches much the same conclusion as did the ADL report, namely, that to date the profit rate appears to have been sufficient to mobilize more than adequate resources for the industry.

In his book Militarism and Industry—Arms Profiteering in the Missile Age, Victor Perlo suggested that we never lose sight of the crude, simple, but basic point that big business is aiming for profits first, last, and all the time—preferably visible and available profits, ready to grasp—and that each big businessman is aiming for his profits in particular rather than for the profits of all, the stability of the economy, or any other general aim.⁶ Based on this hypothesis, he concluded that big business benefits from a militarized economy through government contracts. This business is especially sought after because it provides higher-than-average rates of profit, an unusually high proportion of secret, hence tax-free, profit, and security from ordinary business risks.

A more recent study conducted by the Logistics Management Institute revealed that many defense contractors planned to increase their commercial business as a per cent of their total business. They intend to change their commercial/defense mix primarily by concentrating growth efforts on non-defense business. Their reasons are that:⁷

⁶ Victor Perlo, Militarism and Industry—Arms Profiteering in the Missile Age (International Publishers, 1963), p. 142.

⁷ Logistics Management Institute, Defense Industry Profit Review, Report to the Department of Defense, November 1967, (Washington, D.C.), p. 13.

1. The non-defense sector of the economy is growing more rapidly than the defense sector and they believe it will continue to do so;
2. During the past few years financial risk has shifted significantly from the government to contractors;
3. There is greater profit potential in commercial business; and
4. Commercial business is generally less competitive and has more production stability than defense business.

The views and philosophy presented in the foregoing pages indicate an alarmingly wide divergence of thought on the subjects of defense business and related profits. Where in fact does the defense industry stand today? Are they pulling out? Perhaps the most pointed and accurate portrayal of the defense industry is one presented recently in a series of articles on profit and war published by the National Association of Manufacturers. In the report they state that "there still exists an industry of such size and scope that the law of supply and demand still weighs heavily in favor of the buyer . . . we are in a transitional period where industry considers low return only a secondary problem; the loss of volume, its technical staff and unused facilities are currently considered a greater disaster. Better returns on non-government business will cause many companies to pull away from government business. This may take a long time. Some industrial empires die hard and the government may be willing to pay more and more" The report concludes "that as profit pressures and administrative second-guessing increases, technical innovation in the industry dries up. Risk without promise of

return is a poor motivator, but technical risk combined with some entrepreneurial initiative is vital to the effectiveness of the defense industry."⁸

A wide range of philosophies, feelings, and antidotes have been presented which in essence would seem to indicate that the Department of Defense profit policies leave something to be desired. However, what are the reasons underlying this assumption? Even more important, what does industry believe should be done to balance the views? It seems appropriate to examine these questions in consonance with the outline of the previous chapter.

Industry Views on Weighted Guidelines Technique

When the Weighted Guidelines Technique was first introduced comments typical of one made by Paul M. Trueger seemed to be prevalent. "The Weighted Guidelines method appears to be at least at first blush, a very comprehensive and complex arithmetical exercise."⁹ The Procurement Advisory Committee to the National Security Industrial Association has stated in effect that in dealing with the government, industry is, of course, vitally affected by the laws, regulations, and policies which guide and circumscribe the actions of contracting officers. The general feeling in industry is that the Armed Services Procurement Regulations

⁸"What's Happened to War Profiteering?," National Association of Manufacturers Reports, XIII (November 18, 1968), p. 9

⁹Paul M. Trueger, "Defense Contract Profits—Weighted Guidelines Method," The Journal of Accountancy, (February, 1965), p. 45.

are adequate, and that no basic changes are needed. The most general complaints from industry relate to the many risks inherent in contracting with the government. Industry recognizes that the government, in evaluating the reasonableness of prices and profits of contracts, takes into account such criteria as risk assumption; however, industry further contends that these considerations are inadequate.¹⁰

The Logistics Management Institute conducted a study in November 1967 in which a segment of the defense industry was interviewed for comments on the entire profit element. The Weighted Guidelines and their impact on defense profits were discussed in great detail. A brief summary of the results follows.¹¹

1. Those contractors who were familiar with the policy were in favor of the policy.
2. Eleven of twenty-one contractors believed that the weighted guidelines have caused them to experience a wider range of negotiated target profits than before the guidelines were promulgated.
3. Seventeen of twenty-two contractors believed that weighted guidelines were resulting in higher average negotiated profits.
4. The weighted guidelines do recognize past contract performance and increased risk.

¹⁰National Security Industrial Association Renegotiation Task Committee, Procurement Advisory Committee, "Recognition of the Risks of Government Contracting," (Washington: NSIA Procurement Information Bulletin No. 124-57, September 3, 1957), p. 3-43.

¹¹Logistics Management Institute Report, p. 49.

5. None of the contractors believed that the weighted guidelines encouraged them to supply their own facilities.

6. The majority agreed that the weighted guidelines allow for insufficient emphasis on a contractor's capital investment, and that the guidelines are deficient in that they do not consider volume of defense business as related to total defense investment.

Two points become immediately evident upon analysis of these comments. The capital investment concept and failure of the contractors to mention coming-out profits. The capital investment concept although related to the weighted guidelines will be discussed as a separate and distinct factor. However, it is interesting to note the absence of final profits, particularly in light of the statistical data presented earlier which indicated a significant decrease between negotiated profits and final adjusted profits. The majority of the companies were able to state their profit objectives. These figures are of limited value since the government considers the profit factor separately for each contract; however, the unweighted averages of these objectives are as follows:¹²

Profit to Sales (before tax)

- a. Defense Average 10.4 per cent
Defense Range 7 per cent to 20 per cent
- b. Commercial Average 16.9 per cent
Commercial Range 9 per cent to 27.5 per cent

¹²Ibid., p. 51.

Profit to Total Capital Invested (before tax)

- a. Defense Average 26.44 per cent
Defense Range 18 per cent to 40 per cent
- b. Commercial Average 32 per cent
Commercial Range 20 per cent to 50 per cent

A 2.7 per cent variance exists between the profit to sales average (10.4 per cent) and the total defense department final profit figures (7.7 per cent) averaged over a four year period as shown in Table 2 (pp. 20-21). Very little significance can be attached to these figures since no relationship is made to contract type; additionally, industry often will take a contract with an incompatible profit objective because of the long-range intrinsic benefits that could accrue, e.g., follow-on contracts and commercial application. In order to make comparisons on a common basis, it would be necessary to place a price tag on these factors and add it to the actual profits realized on the contract itself.

The recent study completed by the National Association of Manufacturers did recognize the disparity between going-in and coming-out profit rates.¹³ The study concludes that in spite of the helpful effects of weighted guidelines, the defense industry is plagued by the difference between going-in profits and coming-out profits. The apparent profit levels melt away not only in meeting the technical challenges, the performance guarantees and the management requirements involved, but also in the restraints and controls on cost allowability which hang over the contractor. The report implies that the problem appears to be under the control of industry

¹³"What's Happened to War Profiteering?," p. 9.

since the companies could bid high, well contingencied prices, accepting few onerous terms and conditions. Such is not the case however because of the law of supply and demand indicated earlier.

Capital Investment Concept

The capital investment concept, which suggests that profits should be related to the amount of equipment and facilities required to accomplish a given job, illicit a violent response from all sides. Chapter II attempted to show that the defense department recognizes the failure of current policies to adequately compensate the contractor for his capital investment which has the simple effect of causing contractors' to keep their capital investments to a minimum. The defense department has several concepts under study with the eventual goal of integration into the weighted guidelines method. Does industry concur in this philosophy? The answer is unequivocally, yes!

As indicated earlier, the Logistics Management Institute study showed overwhelmingly that contractors feel the lack of consideration for capital invested is a serious drawback to equitable profit determinations. The contractors themselves suggested several modifications as follows:¹⁴

- After careful consideration of the mechanics of application and assuming that a workable method can be developed, the Weighted Guidelines Technique should

¹⁴Logistics Management Institute Report, p. 58.

be modified to give greater consideration to a company's volume and capital investment; and

- o Greater weight, both negative and positive, should be given to government-owned versus contractor-owned facilities.

Richard C. O'Sullivan, Controller of Textron, Incorporated summarized the philosophy of industry quite succinctly in a recent paper. He said, "Reward for the risk of capital! What does it really mean? . . . to the stockholder—dividends and the market price of his stock. But to the businessman it can mean only one thing—adequate profits; profit that meets predetermined objectives; profit for dividend payments; profit for reinvestment in new plant and equipment; and profit to spur economic growth."¹⁵

In essence, the weighted guidelines are structured to give higher percentages of profit to the labor element of cost. Many contractors are extremely critical of this concept. They feel, for example, that there is a negative incentive in the existing structure to acquire cost-saving machinery because the overall profit base—which is really total cost—will be reduced with the addition of such equipment. It follows that the profit will decrease because of a reduced cost base. In certain cases competition and the nature of the work will require considerable capital investments, but the current incentive structure does not appear to motivate contractor's toward that end.

¹⁵"What's Happened to War Profiteering?," National Association of Manufacturers Reports, XIV (January 20, 1969), p. 18.

Cost Principles

In the search for factors which today have depressed the profits of military suppliers below those of normal business profits, one does not have to go far before finding the cluster of expenditures called "unallowable and nonrecoverable costs." These are the things which companies must buy, but for which the government will not pay. In the real world of business it is a kindergarten concept of book-keeping that the seller must get from the buyer all the costs of running his business—if he wants to stay in business. But defense procurement does not always seem like the real world of business, and there are a host of valid, necessary, and inescapable costs that the seller incurs, but the buyer won't pay for.¹⁶

The foregoing views on allowability of costs appear to represent the defense industry on a universal basis, and have been corroborated by the industry survey conducted by the Logistics Management Institute. Defense industry officials have, for quite some time, viewed the cost constraints as a significant added risk in doing business with the government. The problem is compounded by certain inherent cost add-ons such as the high cost of proposal preparation which absorbs much of a company's better technical talent. Such extensive costs are incurred by the successful bidders. Additionally, related to the cost principles effect on profits, are departmental audits, General Accounting Office (GAO) audits, and the

¹⁶Ibid., p. 16.

Renegotiation Board which also have a related dissipation of profits. In essence, the industry must clear these various hurdles to put money in the bank.

Government Support of the Defense Contractor

A large segment of industry believes that competitive advantages have accrued to some contractors as the result of distribution of government-owned facilities among contractors. The concept requires that the government make a negative adjustment to the profit otherwise developed in the weighted guidelines when government-owned facilities and equipment are used. Industry generally supports the government in its policies to encourage contractors to perform their contracts with a minimum of financial, facilities, or other government related support; and to eliminate the bias toward leasing which industry feels does exist in procurement practices.

Summary

The defense industry philosophies concerning profit determination do not appear to be widely divergent from what is currently in practice. The author believes that satisficing has great relevance in explaining current profit policies. Satisficing is a term coined to describe a profit objective that strives for a satisfactory rather than maximum profit level to provide:

1. a fair return to stockholders on their investment;

2. funds for improvement of existing, and development of new, products:
and

3. funds, or a base for financing, for acquisition of plant and equipment and maintenance of an adequate working capital.¹⁷

On the other hand, the government profit policy is founded on the premise that the profit motive can and should be used to stimulate efficient contract performance. The goal is to reward excellence and penalize inefficiency as does the market place. Government and industry philosophies are quite similar in one respect; they are equally interested in determining a satisfactory profit and insuring that the companies remain solvent. The key to the lock is competition. Research has indicated, however, that there are several categories of profit determination where industry and the Department of Defense remain in opposition. They are listed and briefly summarized as follows.

1. Capital Investment Concept. Both parties have recognized the failure of current policies to include this element for consideration. Most people would agree that without profit our defense effort would either falter or require direct government production, neither of which would be desirable. Unfortunately, the subjective and controversial nature of profits makes it difficult to determine their adequacy. However, it is possible to measure some of the implicit costs which

¹⁷The Department of Defense-Wide Procurement-Pricing Conference, Proceedings of Panel No. 14, Profit, (Hershey: Pennsylvania, 1967), p. 61.

profit must cover. For the large corporations, the most important implicit cost is that of capital. If the cost of capital is acceptable as a minimum standard that will permit a company to maintain its position or grow, it is clear that discussions of profits in vacuo are meaningless. Profits must clearly be related to the return required to generate the investment. Industry recognizes this, but until recently the Department of Defense has ignored it.

2. Allowability of Costs. This area represents perhaps the widest divergence of views. Industry has been highly critical of the cost principles for a number of years, while the Department of Defense has been quite adamant on its stand. Two classic examples will illustrate this disparity. In the first case, during his hearings on "Pyramiding of Profits in the Aircraft Industry," Senator McClellan continually chided the companies for their high return on equity. Mr. Donald W. Douglas, Jr., President of Douglas Aircraft, took bitter issue with McClellan's conclusions. He said a fee on a cost-reimbursable defense contract is not the same as profit. Douglas said his companies profit was 3.2 per cent of costs rather than McClellan's estimate of 7.2 per cent. We regard profit as the excess of income over expenditures. He explained that the 34 million dollar difference between his and McClellan's profit figures covered expenses for which the company was not reimbursed—interest, advertising, amortization of emergency facilities, and specific development projects not recognized as an allowable cost.¹⁸ The second,

¹⁸"Is a 'Fee' on a Defense Contract the Same as a 'Profit'?", Business Week, April 14, 1962, No. 1701, p. 40.

and a more recent example was given in the May 3, 1969 edition of the Washington Post newspaper where in an article, reference was made to the massive cost overruns on the Air Force C5A transport contract with Lockheed Aircraft Corporation. In a briefing given to top defense officials it was pointed out that the "probable ceiling" beyond which all costs must be borne by the contractor was \$1,747,800,000 which results in a staggering loss to Lockheed of \$323,700,000.

3. Contractor Risk. One of the major determinants of the earnings rate demanded by equity investors is their assessment of the relative risks involved in alternative investments. It cannot be denied that the financial risks of the business are, at least on any single contract, lower in the defense business. Even though defense contractors may not go out of business often or suffer major financial losses, a different kind of risk continually plaques their managements. The increased use of firm-fixed price contracts coupled with the fact that management must decide on which direction the corporations resources and future developments should be committed constitutes risk of the highest order. Granted, even if the company is not particularly successful with a given contract, it will be made financially stable; but what of the effect on interest rates, reputation, investment potential, etc. The government contends it adequately provides for risk, but the author does not agree because the real measure of risk is the cost of capital and/or rate of return. Firms faced with keen competition and uncertain profits often rely on equity financing. Every attempt should be made to achieve the lowest cost of capital possible since this could then lead to a maximization of the present worth of the residual owners' investment. Therefore, no capital project should be undertaken

(from a monetary viewpoint) if the cost of capital exceeds the expected rate of return from the project. In addition, as previously pointed out, the increase in firm-fixed price contracts has not resulted in a proportionately higher increase in profits.

In essence, there are similarities in the philosophies and there are significant differences. It does not appear, however, that the dissimilarities are overwhelming.

CHAPTER IV

THIRD-PARTY INTEREST

Congressional Views

The Department of Defense profit objectives and the attendant profit realized by defense contractors have been severely attacked on a number of occasions. The first, and perhaps most severe attack, was made by the McClellan Committee on Government Operations in 1963, wherein the failure of defense contracting officials to effectively prevent the taking of excessive and pyramided profits was underscored.¹ The committee concluded that the government negotiated weapon systems contracts on a basis whereby contractor profits were computed as a percentage of total costs, and that this procedure is disadvantageous to the government and unduly favorable to the contractor because the base for computing profit in system acquisition is broadened by the cost of subcontracting. The report further stated that rate of return on invested capital is also inadequate because of the following procedures in effect at that time:

¹U.S., Congress, Senate, Committee on Government Operations, Pyramiding of Profit and Costs in the Missile Procurement Program, S. Rept. 970, 88th Cong., 2d sess., 1964, p. 84.

1. Surplus government-owned plants were made available free to the producer, keeping to a minimum the invested capital;
2. When plants, equipment and tooling must be provided by the contractor, favorable tax consideration helps to depreciate the investment costs rapidly; and
3. There is less demand on operating capital along with the lower inventory costs in cost-reimbursement contracts because the government makes periodic payments (progress) as work is performed.

The focal point of the report centered around the element of subcontracting. While the profits for defense work did not seem abnormally high, the massive subcontracting which broadened the cost-of-sales base tended to greatly understate the per cent of profits. The guidelines given to determine the amount of a "fair" and reasonable profit, "including that profit on subcontracting, were vague, indefinite and uncertain.

During the course of the hearings, Assistant Secretary for the Army for Installations, Mr. Paul R. Ignatius, stated that the Department of Defense was working on a new set of profit determination guidelines which would do a better job of rewarding the successful contractor and penalizing contractors who failed to meet specified needs. He further stated that the guidelines would put the profit motive to work for government procurement in the same manner that it operates in the private sector.

The refinement of defense profit policies has still not quieted criticism from Congress. Two recent subcommittee hearings have leveled more charges of excessive profits and procurement inequalities at defense officials. The first of

these hearings was conducted before the Subcommittee on Antitrust and Monopoly during the period June through September, 1968.² The stated purpose was "competition in Defense Procurement," which included considerable testimony on the profitability of military business. The key witness during the hearings was Doctor Murry L. Weidenbaum, Professor of Economics at Washington University. Doctor Weidenbaum presented the results of his analysis concerning the basic condition and structure of the military market.³ He concluded that the difference between the profitability of defense firms and nondefense firms has widened over the past decade, in favor of the military contractors. He took a sample of the large defense contractors that do three-quarters or more of their business with the government and compared them with a sample of similar sized industrial corporations that obtain most of their sales in the commercial markets. The results are contained in Table 5. As shown in the table, defense companies operate on much smaller margins than do typical industrial corporations. However, as a result of the large amounts of government-supplied capital, which were not reflected on the books of the companies, the defense contractors report a far higher ratio of capital turnover. Doctor Weidenbaum contended that the markets for major portions of the military sector are highly concentrated, and the major firms that hold entrenched positions in the military market experience profits substantially above those of commercially oriented

²U.S., Congress, Senate, Committee on the Judiciary, Competition in Defense Procurement Hearings, before the Subcommittee on Antitrust and Monopoly of the Committee on the Judiciary, United States Senate on S. Rept. 233, 90th Cong., 2d sess., 1968, p. 203.

³Ibid., p. 205.

TABLE 5

Comparison of Defense and Non-Defense Oriented Companies

| Financial Characteristics | Average of Sample | | | |
|----------------------------|-------------------|---------|------------------|---------|
| | Defense Firms | | Industrial Firms | |
| | 1962-65 | 1952-55 | 1962-65 | 1952-55 |
| Profit Margin on Sales (%) | 2.6 | 3.0 | 4.6 | 4.5 |
| Capital Turnover | 6.8X | 6.1X | 2.3X | 2.9X |
| Return on Net Worth (%) | 17.5 | 18.6 | 10.6 | 13.0 |

corporations of similar size. Therefore, if the Department of Defense can attract more firms into this market, two related accomplishments can occur: the high seller concentration can be reduced and the greater competition is likely to bring profit rates down to more normal levels.

An analysis of the total Fortune Magazine top 500 firms comes very close to the figures in Table 5. For the same years, 1962 to 1965, the aggregate profit margin for the top 500 was 4.8 per cent as opposed to 4.6 per cent of the sample. The capital turnover rate was 2.1 per cent as opposed to 2.3 per cent in the sample. The return on net worth was 10 per cent as opposed to 10.6 per cent.⁴

Another noted economist, Frederic M. Scherer, Professor of Economics, University of Michigan, in a statement before the subcommittee evaluated the weighted guidelines methodology as follows: "the whole system appears to sacrifice

⁴Fortune Magazine, 1962-1965 (data extracted from various issues of Fortune Magazines' annual "Top 500 Industrial Firms").

economic rationality for the sake of administrative expediency. A thorough reevaluation, which keeps sight of the role profits play in allocating resources, is much needed."⁵ He made this statement during a testimony which contradicts Doctor Weidenbaum in that Mr. Scherer made it clear that he considered profits in the defense industry to be much lower over-all since the late 1950's, and may be too low to attract the best resources of firms which do face attractive non-defense opportunities.

The second recent hearing concerned Economics of Military Procurement and was conducted by the subcommittee on economy in government during November, 1968. It was the increasing concern over purported waste and mismanagement that prompted the subcommittee to hold hearings on profits and cost control in defense procurement.⁶ The hearing centered around the testimony of Vice Admiral H.G. Rickover, U.S. Navy (Retired) in which he attacked the whole concept of defense profit objectives and the Weighted Guidelines Technique of accomplishing those objectives. Admiral Rickover found both DOD and industry arguments on low profits unconvincing. He claims that Renegotiation Board figures and the Logistics Management Institute study are unsupportable. First, the profit figures from the Renegotiation Board are unreliable for determining overall profits because of the

⁵ Ibid., p. 136.

⁶ U.S., Congress, Senate, Joint Economic Committee, Economics of Military Procurement, Hearings, before the subcommittee on Economy in Government of the Joint Economic Committee, United States Senate, 90th Cong., 2d sess., 1968, p. 11.

exemptions allowed under the Renegotiation Act. Secondly, the Logistics Management Institute study was based on unverified and unaudited information volunteered by defense contractors who elected to participate in the study.

DOD admits to a 22 per cent increase in profits on defense contracts under its weighted guidelines method of profit computation, but argues that this increase is only in the negotiated or "going-in" profit. (Table 1, p. 19, would tend to substantiate this, but indicates the greatest increases fall in the cost-reimbursement contract types.) DOD contends that contractors generally incur higher costs than they originally estimate when pricing the order and as a result, actual, or "coming-out" profits are much less. (Table 2, pp. 20-21, substantiates this argument.) Admiral Rickover, however, believes the defense in-house profit review system does in fact corroborate his theory that contractors actually do realize their "going-in" profits.

The DOD weighted guideline method of establishing profit was, among other things, supposed to discriminate among contractors so that those who performed well or took more difficult contracts would receive higher profits vis-a-vis those who performed poorly or took less difficult contracts. Admiral Rickover implies that the only result in this respect has been that DOD has increased profits paid on defense contracts without regard to the nature of the contract or to contractor performance.

Since existing defense policies only consider profits as a percentage of cost, it follows that a low profit percentage is automatically deemed a low profit. This can be misleading because of the failure to consider capital investment as a significant

element. Admiral Rickover supported this theory by inferring that what may appear to be a nominal profit as a percentage of cost, may be exorbitant when considering the contractor's investment. This is why contractor investment should be an essential consideration in evaluating profitability of defense contracts. This in substance is the only element of the total profit determination concept on which all parties agree (defense, Congress, industry, and other interested experts). There is a wide divergence of views concerning almost every other element of profit; but a particularly wide variance is obvious in the area of profit levels realized. DOD and the defense industry are generally in agreement that profit levels have risen marginally during the past decade but still remain too low. They base their arguments on in-house figures and Renegotiation Board figures. On the other hand, Congressional leaders and several renown economists contend that profits are excessive, and base their views on data extracted by private, unrelated studies and dissimilar interpretations of the forementioned in-house statistics.

Measuring profits is complicated by the fact that commercial work and government work are usually mixed together in the company profit and loss statements. Therefore, some doubt can be cast on the reliability of any data extracted from industry records. The renegotiation Board figures are on a total annual basis with no regard to individual contracts. In addition, as previously pointed out, the annual report of the Board specifically cautions against the use of such figures for generalizations about the profitability of defense business as a whole or even the profitability of the renegotiable sales because of the exemptions taken into consideration. The in-house figures generated by DOD hold some doubt concerning their

validity because of the complete absence of data on firm-fixed price contracts which represents better than 50 per cent of the total contracts awarded. The question becomes not one of which data are more accurate, but rather how costs can be recorded in such a manner, and in a common language so that the government and contractors can communicate meaningfully regarding costs and profits. But even more important, to provide both sides and interested third parties with comparable data so that criticisms and divergent views will not cloud the real issue, e.g., to determine the effectiveness of existing procedures and to create a true means of comparison between profits in the defense industry and the commercial industry.

Uniform Standards of Accounting

In order to get the common language and proper communications indicated above, it would appear necessary to develop a standardized method of accounting acceptable to both government and industry. There are many proponents of such a concept. The General Accounting Office and the Department of Defense are in complete agreement that better accounting systems for defense contractors is a desirable objective.⁷ Some segments of industry also concur in the concept. An editorial from Forbes Magazine reads in part as follows: ". . . before Government action is taken, the stock exchanges, industry groups, and certified public accountants

⁷Ibid., p. 25.

themselves ought to get together to establish accounting standards that will be standard, and a method of enforcement that will be enforceable."⁸

It was Lord Kelvin who said: "When you measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in number, your knowledge is of a meager and unsatisfactory kind."⁹

The author is of the firm belief that knowledge of profit rates is truly of a meager and unsatisfactory kind, and that the absence of a universally accepted standard of measurement makes an adequate evaluation of profit levels highly unlikely. Accordingly while critics may consider their theories as reasonable and valid, and even though each has some merit, to accept the premise that DOD policies are totally ineffective would be rash and premature.

⁸ Editorial, Forbes Magazine, October 15, 1966, p. 8.

⁹ U.S., Congress, Senate, Joint Economic Committee, p. 25.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The purpose of this thesis research project was to examine the nature of profit, and the extent to which profit is an objective and motive of business firms in general and defense contractors in particular. The ultimate aim of the study was to evaluate the effectiveness of methods by which the Department of Defense attempts to utilize this profit motive in promoting the efficiency of its contractors. A concurrent aim of this study was to determine the compatability between DOD and defense industry profit philosophies. The scope of the study narrowed to concentrate on the profit motives of defense, defense industry and interested third-party elements with a comparison of the areas where significant departures were evident.

Chapter II presented several theories of profit or return and attempted to establish a valid concept for purposes of this study. In general, profit was examined from three points of view—accounting, economic, and legislative/regulatory. Accounting profit was classified as an estimate of the financial effects of operations during the accounting period on the owner's equity. Economic profit was expressed

as the rewards for bearing risks, the consequences of frictions in the competitive adjustment of the economy to dynamic charges, and the reward for successful innovation. A mix of accounting and economic profits would apply in the defense industry.

Legislative/regulatory profit was considered concurrent with a historical overview of profit development. It was pointed out that profits were negotiated out of habit or precedence until implementation of the Armed Services Procurement Act and subsequent implementation of the regulations. These were followed by such supplementary constraints as the Renegotiation Act of 1951 and the Vinson-Trammell Act of 1934. Congressional interest in DOD profit procedures began in 1962 with the McClellan Committee Hearings which attacked the excessive profits realized by the defense industry. Shortly thereafter, the Department of Defense implemented the weighted guidelines method of profit determination. A detailed evaluation of the Weighted Guidelines Technique was presented with accompanying statistical displays to emphasize the changes brought about in profit rates as a result of this implementation. The statistical tables represent profit rates negotiated by type of work and type of contract. They were further broken down into pre-weighted guidelines, post-weighted guidelines, and negotiated versus final profit figures. Significant elements of these tables indicated the following:

1. final profit rates were considerably less than initial, negotiated profit rates;
2. a significant increase in firm-fixed price contract awards with a disproportionate increase in contractor risk allowances; and

3. apparent misuse of given ranges under the Weighted Guidelines Technique.

The study then progressed into an analysis of supplementary factors which affect final profits realized by the defense industry. The concept of capital invested as a means to determine profit was investigated and it was pointed out that the weighted guidelines methodology does not provide for this area. Secondly, the effects of existing cost principles and their attendant drain on contractor's profits was discussed. The final area of discussion in Chapter II revolved around the various means of providing government support to the contractors.

Chapter III portrayed the general philosophy of the defense industry with particular emphasis on the Weighted Guidelines Technique and related elements such as cost principles, capital investment concept, and leasing. Profit was seen to be an extremely subjective concept for a contractor, with the acceptable amount of profit being determined by a number of factors such as profit which can be earned doing other work, and the amount of fixed costs that can be absorbed by the work in question. Based on stated philosophies, an attempt was made to ascertain why companies feel obligated to enter the defense business at all. As an adjunct to this discussion, an evaluation was made concerning the adequacy of current and potential profit levels. Substantiation for this segment of the study was obtained largely from the results of an extended profit review conducted by the Logistics Management Institute. The Institute recently issued a report containing the results of a defense industry questionnaire applicable to this study. Permission was received to extract salient portions of that input.

The National Association of Manufacturers has also issued a series of reports on the subject of profit and war. These articles relate closely to the overall view held by the defense industry and were presented in Chapter III. The tenor of this chapter concentrated on the specific views of industry concerning the weighted guidelines. During this presentation, profit objectives expressed in dollars were touched on briefly comparing them with certain statistical data given earlier in the paper. A detailed analysis of the capital investment concept was also made due to industry's strong feelings for the concept. It was concluded that competition and the nature of the work in certain cases will require considerable capital investments, but the current procedures do not meet that requirement; and this deficiency is quite obvious to the defense industry.

The final sections of Chapter III were devoted to a discussion of cost principles and government support of the defense contractor. In essence, industry believes the existing structure of the cost principles is inequitable and that a significant portion of their profit dollar is lost because of unallowability of costs. They further believe that a large segment of industry realizes a competitive advantage as the result of distribution of government-owned facilities among contractors.

A comparison of philosophies appears to indicate that, in general, the defense industry views are not widely divergent from current practice. There are, however, certain elements of the total system that remain a matter of serious contention.

Chapter IV inspected the views of third-party elements, with particular emphasis on congressional interest. It was considered appropriate to provide a separate, thorough, and concise examination of this area due primarily to the recent

criticism introduced by these third-party elements. The McClellan Committee hearings on excessive profit-taking by industry leads the parade. More recent investigations conducted by the Subcommittee on Antitrust and Monopoly, and the Subcommittee on Economy in the Government also made the following broad attacks:

1. waste and inefficiency exists in government procurement;
2. excessive profits are realized by much of the defense industry; and
3. current profit policies and procedures are grossly ineffective.

During the course of the hearings many interested experts presented testimony. The most salient testimony was given by Dr. Murry F. Weidenbaum, Professor of Economics at Washington University, who presented the results of his own analysis concerning the condition and structure of the military market. He contended that much of the military market experiences profits substantially above those of commercially oriented corporations of similar size. Another interested expert who presented critical testimony was Vice Admiral H.G. Rickover, U.S. Navy (Retired), wherein he attacked the whole concept of defense profit objectives and the Weighted Guidelines Technique of accomplishing those objectives.

The final segment of Chapter IV centered around a brief discussion of uniform standards of accounting. This was considered particularly relevant to this thesis since the bulk of criticism and divergent views appears to stem from the incompatibility of statistics.

The purpose, organization, methodology, and content of this thesis research project has been briefly reviewed. The organization and methodology employed by the writer were chosen on the basis of their potential to enable valid conclusions to be drawn regarding the objectives of the study.

Conclusions

This study has attempted to answer certain questions regarding Department of Defense profit policies. The major question was:

- How effective are the Department of Defense profit policies and procedures?

Other questions for which the research was intended to provide answers were:

- Is DOD really making the profit motive work to achieve greater efficiency and higher levels of contract performance?
- Are defense profit opportunities sufficient to attract and maintain the best industrial capabilities?
- What differences exist between industry and defense profit objectives and what effect do these differences have on meeting defense profit objectives?
- Do the weighted guidelines work toward achieving the desired results?
- Do defense objectives recognize the need for compensation of capital employed, risk, and know-how furnished?

On the basis of the research conducted and presented herein the following conclusions have been reached.

The Weighted Guidelines Technique is the prescribed tool for satisfying defense policies and is patently an improvement over the earlier practice of negotiating standard profit rates through habit or precedence. There are, however, various limitations inherent in this technique.

The effectiveness of this method is limited by the fact that it is only a procedure for determining bargaining positions. The relative weights assigned to the various factors may or may not be given effect in the profit which is finally negotiated. As indicated previously, several of the factors have a rather wide range, but even with this latitude, the majority of the contracts fall into the middle of the profit range. This would seem to indicate a certain lack of discrimination in the selection and assignment of weights which is contrary to DOD policy that profit must be tailored to fit each individual procurement situation.

The system calls for the establishment of higher profit rates as standards; however, there is some feeling, based in part on the fact that the guidelines technique is cost oriented, that this gives the contractor an inducement to submit unrealistic bids on other elements in an effort to sell the job. If this is true, current policies may be directly opposed to one of the major purposes of the increased use of incentive contracts—the purpose of obtaining more realistic original proposals.

The increased attention on the contractor risk factor coupled with the governments desire to increase the use of high contractor risk contracts is not commensurate with the increase in "coming-out" profits over the past decade.

The question of what is a good profit on a percentage of sales or cost is difficult to answer because profit really has no relationship to sales or cost. When a person buys stock in a company, he is not interested in sales or cost of sales. He is interested principally in the dividend rate. This is basically the argument of those who wish to see a percentage of invested capital come into use. This concept has undergone considerable scrutiny by DOD, and it appears that a subsequent

change will be made to the Weighted Guidelines Technique modifying it to include a return on investment approach to profit. This should then provide an equitable portrayal of the relationship of capital employed to contract requirements. In addition, it will undoubtedly have a significant impact on final profit rates.

Business firms are motivated by a profit goal, although not as simply or as clearly as is sometimes assumed. Profit may not be the only objective of the business firm; at times other objectives may be of controlling importance. Moreover, many firms may not strive for absolute profit maximization, but merely a satisfactory earning level. Loss avoidance, on the other hand, is a more universal and compelling motive. Thus qualified, the profit motive does constitute an effective means by which the government may promote efficiency on the part of defense contractors. This potential for efficiency has been largely diluted and rendered ineffective because of offsetting forces such as the risk factor previously indicated, unallowability of costs and failure to consider the contractor's investment base.

Research leads this writer to conclude that the size and scope of the defense industry coupled with the law of supply and demand result in a captive environment. There does not appear to be substantial evidence to support a theory that the defense industry is eroding and shifting in the direction of the commercial market place. So long as the criticality of the defense posture does not yield, and industry requirements are recognized, there will be no flight away from defense business. Additionally, as long as the defense industry remains relatively immune to cyclical variations of normal business and offers some assurance of a small but steady

return to the investor in dividends or capital growth, the industry should continue its stability. Further, it is concluded that defense and industry philosophies are not dissimilar in theory, but fail to meet in practice. Elimination of failings such as nonpayment for risk of capital and the future consideration of normal business expenses and technological research will make this captive industry much more responsive and efficient.

It is important to understand that the Weighted Guidelines Technique is used only for developing the government's profit objective. Contract profit is usually negotiated in the total price package, not individually by each of the guideline factors. The elements contained in the guideline structure are used only to build the logic used in developing the total profit dollars which will be offered to the contractor. It is concluded that the defense industry is generally in agreement with this logic, but that increased and improved application of the techniques is necessary at the working level.

This writer discovered a major problem during the research phases of this thesis which certainly casts doubt on the validity of excessive or low profit claims made by any party. This problem focuses on the source of statistics relevant to contracts and profit. It is very difficult to get the accurate and comparable costs because of the variety of ways in which they are handled. The Department of Defense, the defense industry, the Renegotiation Board and private study groups all have or do publish cost data which each contributor claims is representative. This writer concludes that each source does in fact have representative data within their own unique parameters; however, commonality does not exist, and it therefore

comes down to the point of which representative data is most representative — always atypical. DOD and the defense industry are jointly investigating the feasibility of uniform standards of accounting. A system of this nature certainly has merit but would have to overcome serious obstacles to function adequately since accounting systems are basically a management system and not a financial system. It must therefore be responsive to the needs of its own corporation. In other words, they are autonomous and unique.

Current DOD policies on profit determination are marginally effective despite severe shortcomings. Conceptually, the weighted guidelines approach as presently constituted does not adequately motivate the contractor to achieve greater efficiency in the performance of the contract. Both defense and industry concur that the current policies are a far more sophisticated and systematic approach than its historical counterpart; and both recognize the inherent shortfalls. It may therefore be said that the defense and industry profit philosophies and motives are compatible.

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